

G. LYNN KURTEFF, PHD

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CURRENT POSITION

Researcher in the department of Speech, Language & Hearing Sciences, UT Austin

RESEARCH INTERESTS

- Neurobiology of speech perception & production
- Speech motor control and auditory feedback processing
- Reorganization of language after stroke & surgical intervention
- Brain-to-text decoding, brain-computer interfaces

CLINICAL INTERESTS

- Neurogenic communication disorders: aphasia & apraxia of speech
- Head & neck cancer, dysphagia
- Gender-affirming voice therapy

EDUCATION

PhD in Speech, Language & Hearing Sciences 2018 - 2024
University of Texas at Austin Austin, TX

- Mentor: Liberty Hamilton
- Other committee members: Jun Wang, Rosemary Lester-Smith, Maya Henry, Stephanie Riès
- Dissertation: *Cortical Suppression of Auditory Feedback during Speech Production and Perception*

M.S. in Speech, Language & Hearing Sciences 2018 - 2020
University of Texas at Austin Austin, TX

- Mentors: Liberty Hamilton, Rosemary Lester-Smith
- Thesis: *Modulation of Neural Responses to Naturalistic Speech Production and Perception*

B.A. in Linguistics and Psychology 2012 - 2015
University of California, Berkeley Berkeley, CA

- Mentors: Keith Johnson, Lev Michael, Joseph Campos

HONORS AND AWARDS

- UT Austin CARE Research Day, Best Poster award, Spring 2024, \$50
- Texas Speech-Language-Hearing Foundation, International travel grant, Spring 2024, \$1,700
- William Orr Dingwall Foundation Dissertation Fellowship in the Cognitive, Clinical, and Neural Foundations of Language recipient, Fall 2023 - Spring 2024, \$40,000
- UT Austin Graduate School Fellowship recipient, Summer 2023 (declined), \$10,672
- Texas Speech-Language-Hearing Foundation, President's Research Endowment Fund recipient, Spring 2023, \$1,375
- Cold Spring Harbor Laboratory Regeneron Scholarship recipient, Genetics & Neurobiology of Language course, Summer 2022, \$1,750
- TSHA 2022 Audiology Research Symposium award winner, Winter 2022, \$250
- TSHA 2021 Audiology Research Symposium award winner, Spring 2021, \$250
- UT Austin Moody Doctoral Fellowship recipient, Fall 2019 - Spring 2022, \$5,000
- UT Austin Provost Fellowship recipient, Fall 2018 & Summer 2019, \$5,000
- UC Berkeley Dean's Honors, Spring 2015 & Fall 2015

PEER-REVIEWED JOURNAL ARTICLES

1. **Kurteff, G.L.**, Lester-Smith, R.A., Martinez, A., Currens, N., Holder, J., Villarreal, C., Mercado, V.R., Truong, C., Huber, C., Pokharel, P., & Hamilton, L.S. (2023). *Speaker-induced suppression in EEG during a naturalistic reading and listening task*. Journal of Cognitive Neuroscience. doi:10.1162/jocn_a_02037
2. Levy, D.F., Silva, A.B., Scott, T., Liu, J., Harper, S., Zhao, L., Hullett, P., **Kurteff, G.**, Andrews, J., Wilson, S.M., Leonard, M., & Chang, E.F. (2023). *Apraxia of speech with phonological alexia and agraphia following resection of the left middle precentral gyrus*. Journal of Neurosurgery: Case Lessons. doi:10.3171/case22504
3. Ammanuel, S., Almeida, N.C., **Kurteff, G.**, Kakaizada, S., Molinaro, A., Berger, M.S., Chang, E.F., & Hervey-Jumper, S.L. (2021). *Natural language assessment correlates with health-related quality of life in adult glioma patients*. Journal of Neuro-Oncology. doi:10.1093/neuonc/noaa215.575
4. Chang, E.F., **Kurteff, G.**, Andrews, J., Briggs, R.G., Conner, A.K., Battiste, J.D., & Sughrue, M.E. (2020). *Pure apraxia of speech after focal surgical resection of area 55b in dorsal premotor cortex*. Neurosurgery. doi:10.1093/neuros/nyaa002
5. De Witte, E., Piai, V., **Kurteff, G.**, Cai, R., Mariën, P., Dronkers, N., Chang, E.F., & Berger, M.S. (2018). *A valid alternative for in-person language assessments in brain tumor patients: Feasibility and validity measures of the new TeleLanguage test*. Neuro-Oncology Practice. doi:10.1093/nop/npy020
6. Chang, E.F., **Kurteff, G.**, & Wilson, S.M. (2018). *Selective interference with syntactic encoding during sentence production by direct electrocortical stimulation of the inferior frontal gyrus*. Journal of Cognitive Neuroscience. doi:10.1162/jocn_a_01215

JOURNAL ARTICLES SUBMITTED/IN PREPARATION & PREPRINTS

All listed preprints submitted to peer-reviewed journals

1. **Kurteff, G.L.**, Field, A.M., Asghar, S., Tyler-Kabara, E.C., Clarke, D., Weiner, H.L., Anderson, A.E., Watrous, A., Buchanan, R.J., Modur, P.N., & Hamilton, L.S. (2024). *Processing of Auditory Feedback in Perisylvian and Insular Cortex*. bioRxiv. doi:10.1101/2024.05.14.593257
2. Zhao, L., Silva, A.B., **Kurteff, G.L.**, & Chang, E.F. (2023). *Inhibitory control of speech production in the human premotor frontal cortex*. bioRxiv. doi:10.1101/2023.03.01.530698

CONFERENCE PRESENTATIONS

1. **Kurteff, G.L.**, Tyler-Kabara, E.C., Clarke, D., Weiner, H.L., Anderson, A.E., Watrous, A., Asghar, S., Field, A., & Hamilton, L.S. (2024). *Intracranial EEG Processing of Auditory Feedback in Perisylvian Cortex*. Poster session presented at the Annual Meeting of the Cognitive Neuroscience Society, Toronto, ON, Canada.
2. Hamilton, L.S., Asghar, S., Desai, M., **Kurteff, G.L.**, Field, A., Nussbaum, N.L., Clarke, D., Tyler-Kabara, E.C., Anderson, A., & Weiner, H.L. (2023). *Utilizing Clinical Intracranial Epilepsy Monitoring Infrastructure for Basic Science Research of Speech and Language Development*. Poster session presented at the Annual Meeting of the Child Neurology Society, Vancouver, BC, Canada.
3. **Kurteff, G.**, & Hamilton, L.S. (2022). *Stereo EEG mapping of sensorimotor responses to self-generated speech*. Poster session presented at the Annual Meeting of the Texas Speech-Language Hearing Association, Fort Worth, TX; Association for Research in Otolaryngology, virtual meeting due to COVID-19.
4. Cheng, C., Young, N., Teplansky, K., **Kurteff, G.**, Salman, R., Mau, T., & Wang, J. (2022). *Fricative production in laryngeal, electrolaryngeal, and tracheoesophageal speech*. Poster session presented at the biannual meeting of the Conference on Motor Speech, Charleston, SC.
5. **Kurteff, G.**, & Hamilton, L.S. (2021). *Encoding of phonological features in intracranial recordings of human speech cortex during a dual perception-production task*. Poster session presented at the Annual Meeting of Advances and Perspectives in Auditory Neuroscience, virtual meeting due to COVID-19.
6. **Kurteff, G.**, Martinez, A., Currens, N., Holder, J., Mercado, V., Truong, C., Huber, C., Pokharel, P., & Hamilton, L.S. (2020a; 2021b). *Methods for Investigating Continuous Speech Production and Perception with EEG*. Poster session presented at a. the Annual Meeting of the Society for Neurobiology of Language; b. Texas Speech-Language Hearing Association, virtual meetings due to COVID-19.
7. **Kurteff, G.**, Fox, N.P., Dronkers, N.F., Desai, M., Shafi, A., & Chang, E.F. (2019). *Behavioral and neuroanatomical description of stimulation-induced speech arrest*. Poster session presented at the Annual Meeting of the Cognitive Neuroscience Society, San Francisco, CA, USA.
8. Chang, E.F., **Kurteff, G.**, & Wilson, S.M. (2017). *Selective interference with syntactic encoding during sentence production by direct electrocortical stimulation of the inferior frontal gyrus*. Poster session presented at the Annual Meeting of the Society for the Neurobiology of Language, Baltimore, MD, USA.
9. De Witte, E., Piai, V., **Kurteff, G.**, Cai, R., Berger, M.S., Chang, E.F., & Dronkers, N. (2016). *Usability and validity of a phone battery to assess language functions in brain tumor patients undergoing awake surgery*. Poster session presented at the Annual Meeting of the Academy of Aphasia, Llandudno, Wales; UK and Society of Neurooncology, Scottsdale, AZ, USA.

THESES AND DISSERTATIONS

1. **Kurteff, G.L.** (submitted). *Cortical Suppression of Auditory Feedback during Speech Production and Perception*. PhD dissertation.
2. **Kurteff, G.** (2020). *Modulation of neural responses to naturalistic speech production and perception*. Masters thesis. doi:10.26153/tsw/14461

RESEARCH EXPERIENCE

UT Austin Department of Speech, Language, and Hearing Sciences 2018 - Present
Hamilton Lab - Graduate Research Assistant Austin, TX

- Principal Investigator: Liberty Hamilton; rotation with Jun Wang Fall 2021
- Researching processing of auditory feedback during speech production with invasive and noninvasive electrophysiology (ECoG, sEEG, EEG, EMG)
- Rotation with Jun Wang focused on decoding of linguistic features from EEG

UCSF Department of Neurological Surgery 2016 - 2018
Chang Lab - Research Specialist San Francisco, CA

- Principal Investigator: Edward F. Chang
- Performed research on recovery from aphasia in postoperative neurosurgical patients and intraoperative cortical stimulation mapping
- Maintained active collaborations on multiple projects after leaving lab

UC Berkeley Department of Linguistics 2015
Undergraduate Researcher Berkeley, CA

- Principal Investigators: Keith Johnson & Sarah Bakst
- Transcribed/aligned phonetic information in Praat and scripted ultrasound image extraction for Sarah Bakst's dissertation research

UC Berkeley Department of Linguistics 2015
Undergraduate Researcher Berkeley, CA

- Principal Investigator: Dr. Lev Michael
- Used FLEx to create and maintain a corpus of the morphology of Matsigenka, an Arawakan language

UC Berkeley Department of Psychology 2014 - 2015
Research Assistant & Morning Supervisor Berkeley, CA

- Principal Investigator: Dr. Allison Harvey
- Recruited participants and administered cognitive-behavioral tasks to assess early-morning wakefulness in teenagers with sleep disorders
- Trained other RAs to collect data and oversaw morning experiments

TEACHING EXPERIENCE

UT Austin 2019 - 2023
Guest Lecturer Austin, TX

- Guest lecturer for departments of Speech, Language and Hearing Sciences, Linguistics, and Natural Sciences
- Lecture titles: "Introduction to EEG," "Broca and Wernicke are Dead," "Cortical Stimulation Mapping"

UT Austin 2021
Assistant Instructor Austin, TX

- Served as the primary instructor for undergraduate course "Language and the Brain"
- Designed all course materials and led lectures for class of ~70 students and supervised two TAs

UT Austin*Teaching Assistant*

2019 - 2020

Austin, TX

- TA for “Language and the Brain,” taught by Dr. Liberty Hamilton in Fall 2019 and Fall 2020 semesters

UC Berkeley “DeCal” Program*Student Instructor*

2013 - 2015

Berkeley, CA

- With three other student instructors, instructed a two unit course at UC Berkeley, “Intro to 3D Modeling” for three semesters

CLINICAL EXPERIENCE

Ascension Seton*Speech-Language Pathology Externship*

2021

Austin, TX

- Supervisor: Elizabeth Otterbein, MS, CCC-SLP
- Treated adult clients in a mixture of inpatient and outpatient hospital settings
- Inpatient treatment focused on bedside swallow examinations, modified barium swallow studies, and dysphagia treatment
- Outpatient treatment focused on management of tracheoesophageal voice prostheses in people with total laryngectomies, voice and lymphedema therapy for survivors of head and neck cancer, modified barium swallow studies, cognitive-linguistic therapy, and gender-affirming voice therapy

All Care Therapies*Speech-Language Pathology Externship*

2020

Georgetown, TX

- Supervisors: Holly Mouton, MS, CCC-SLP; Lynzy Melzer, MA, CCC-SLP
- Treated pediatric and adult clients in a private practice setting
- Treatment focused on early language, articulation and phonological disorders, and autism spectrum disorders

Round Rock ISD*Speech-Language Pathology Externship*

2020

Round Rock, TX

- Supervisors: Vanessa Baca, MA, CCC-SLP; Jeanette Fields, MA, CCC-SLP
- Delivered speech-language pathology services to special education students at Stony Point High School with autism spectrum disorders, cognitive deficits, and developmental disorders
- Services focused on social communication, receptive and expressive language through AAC, fluency, articulation, and joint attention

UT Austin*Graduate Student Clinician*

2019

Austin, TX

- Rotation with Nickole Hines-Staples, MA, CCC-SLP, BIES: Evaluation and treatment of children with expressive language, phonological, and articulation disorders at the UT Speech and Hearing Clinic (UTSHC)
- Rotation with Jessica H. Franco, PhD, CCC-SLP, BCBA-D: Treated adults with Autism Spectrum Disorder and Down syndrome in a group setting as part of UTSHC’s “Convo Club;” evaluated children with phonological disorders
- Rotation with Kristy Armer, M.S., CCC-SLP: Evaluation and treatment of varying adult populations, including Autism Spectrum Disorder and aphasia

UCSF Department of Neurological Surgery

Assistant Specialist

2016 - 2018

San Francisco, CA

- Performed aphasia evaluations using WAB, BNT, and QAB (Quick Aphasia Battery) in presurgical and postsurgical patients
- Worked with team of neurologists and neurosurgeons to intraoperatively map language in the brain using nonstandardized language assessments and electrocortical stimulation
- Collected data to help develop new aphasia assessments (QAB, TeleLanguage)

ACADEMIC AND COMMUNITY SERVICE

Out in Science, Technology, Engineering, and Mathematics (oSTEM)

2022 - 2024

Member

Austin, TX

- Member of an on-campus chapter of an organization for LGBT+ students in STEM
- Discussed my experience as a trans PhD student with undergraduates/recent graduate members considering graduate school

Neuroscience Undergraduate Reading Program (NURP)

2020

Mentor

Austin, TX

- Mentored student who conducted original research on an EEG dataset through student organization in the Department of Neuroscience
- Project title: “Do speech errors affect EEG activity in naturalistic perception and production?”

brainWaves Podcast

2019 - 2020

Co-Host

Austin, TX

- Co-host of “brainWaves” podcast with Maansi Desai, fellow graduate student at UT
- Podcast topics included auditory neuroscience, communication disorders, and how to effectively communicate science to the general public as a researcher
- Prominent researchers from the fields of auditory neuroscience and communication sciences and disorders are invited as guests onto the podcast to communicate their research in a fashion suitable for the general public

Society for Linguistics Undergraduate Students (SLUGS)

2014 - 2015

Member & President

Berkeley, CA

- Revitalized dormant organization for linguistics undergraduates at UC Berkeley
- Coordinated talks for the club from various guest speakers across the disciplines of linguistics (John Ohala, David J. Peterson, John Quijada)
- Served as club president from May 2015 to December 2015; returned as an invited speaker/alumnus to discuss my research in the Chang Lab in April 2017

3D Modeling Club (3DMC)

2013 - 2015

Founding Member

Berkeley, CA

- Created UC Berkeley’s first 3D modeling and printing club with other students
- Expanded club by hosting weekly meetings and teaching a student-taught course through the university’s “DeCal” program
- Secured funding for club-owned 3D printing equipment and a dedicated “makerspace” on campus
- Networked with professional organizations in the 3D printing industry such as Autodesk

RESEARCH SKILLS

- Data collection: EEG, ECoG/sEEG, MRI/fMRI, EMG, cortical stimulation, clinical speech and language assessment
- Analysis techniques: Event-related potentials, neural time series extraction, encoding/decoding models, temporal receptive field modeling, mixed-effects modeling, voxel-based lesion symptom mapping, stereotactic electrode localization, corpus analysis, nonnegative matrix factorization, phonetic transcription and forced alignment
- Programming languages: Python, MATLAB, R, Swift (Apple fork of Objective-C)
- Miscellaneous software: Praat, FreeSurfer, MRICron, FLEx, XCode, ffmpeg/Audacity, Adobe Creative Cloud (Illustrator, Photoshop, Premiere), L^AT_EX